PENDING CLAIMS

1. (Previously Presented) A method for *in vivo* down-regulation of growth differentiation factor 8 (GDF-8) activity in an animal, the method comprising administering to said animal an immunogenically effective amount of

- at least one GDF-8 analogue, which is a GDF-8 polypeptide that has been modified by substituting at least one first amino acid sequence in SEQ ID NO: 11 or 12 with at least one second amino acid sequence which comprises a foreign T_H epitope, wherein said first amino acid sequence is from one or more of residues 1-12, 18-41, 43-48, 49-69, or 79-104 in SEQ ID NO: 11 or 12.

2. (Previously Presented) The method according to claim 1, wherein the first amino acid sequence is positions 1-12, 18-30,42-51, 82-86, and 105-109 in SEQ ID No:11 or 12.

3. (Previously Presented) The method according to claim 1, wherein the modification has as a result that a substantial fraction of GDF-8 B-cell epitopes are preserved and that

- at least one first moiety is introduced which effects targeting of the modified molecule to an antigen presenting cell (APC) or a B-lymphocyte, and/or
- at least one second moiety is introduced which stimulates the immune system, and/or
- at least one third moiety is introduced which optimises presentation of the modified GDF-8 polypeptide to the immune system.

4. (Previously Presented) The method according to claim 3, wherein the modification includes introduction as side groups, by covalent or non-covalent binding to chemical groups in GDF-8 or a subsequence thereof, of the foreign T_H epitope and/or of the first and/or of the second and/or of the third moiety.

5. (Previously Presented) The method according to claim 3 or 4, wherein the modification includes amino acid substitution, deletion, insertion, addition, or any combination thereof.

6. (Original) The method according to claim 5, wherein the modification results in the provision of a fusion polypeptide.

7. (Previously Presented) The method according to claim 5, wherein the modification results in a substantial preservation of the overall tertiary structure of GDF-8.

8. (Withdrawn) The method according to claim 2, wherein the modification includes duplication of at least one GDF-8 B-cell epitope and/or introduction of a hapten.

9. (Previously Presented) The method according to claim 3, wherein the foreign T-cell epitope is immunodominant in the animal.

10. (Previously Presented) The method according to claim 3, wherein the foreign T-cell epitope is promiscuous.

11. (Previously Presented) The method according to claim 59, wherein the natural T-cell epitope is selected from a Tetanus toxoid epitope, a diphtheria toxoid epitope, an influenza virus hemagluttinin epitope, and a *P. falciparum* CS epitope.

12. (Withdrawn) The method according to claim 3, wherein the first moiety is a substantially specific binding partner for a B-lymphocyte specific surface antigen or for an APC specific surface antigen, such as a hapten or a carbohydrate for which there is a receptor on the B-lymphocyte or the APC, such as mannan or annose.

13. (Withdrawn) The method according to claim 3, wherein the second moiety is selected from a cytokine, a hormone, and a heat-shock protein.

14. (Withdrawn) The method accord to claim 3, wherein the cytokine is selected from, or is an effective part of, interferon γ (IFN-γ), Flt3L, interleukin 1 (IL-1), interleukin 2 (IL-2), interleukin 4 (IL-4), interleukin 6 (IL-6), interleukin 12 (IL-12), interleukin 13 (IL-13)

interleukin 15 (IL-15), and granulo-cyte-macrophage colony stimulating factor (GM-CSF), and wherein the heat-shock protein is selected from the group consisting of HSP70, HSP90, HSC70, GRP94, and calreticulin (CRT), or an effective part thereof.

15. (Withdrawn) The method according to claim 3, wherein the third moiety is of lipid nature, such as a palmitoyl group, a myristyl group, a farnesyl group, a geranyl-geranyl group, a GPI-anchor, and a N-acyl diglyceride group.

16. (Previously Presented) The method according to claim 1, wherein the GDF-8 analogue is derived from the C-terminal, active form of GDF-8.

17. (Cancelled)

18. (Withdrawn) The method according to claim 1, wherein presentation to the immune system is effected by having at least two copies of the GDF-8 polypeptide, the subsequence thereof or the modified GDF-8 polypeptide covalently of non-covalently linked to a carrier molecule capable of effective presentation of multiple copies of antigenic determinants.

19. (Previously Presented) The method according to claim 1, wherein an effective amount of the GDF-8 analogue is administered to the animal via a route selected from the parenteral route such as the intradermal, the subdermal, the intracutaneous, the subcutaneous, and the intramuscular routes; the peritoneal route; the oral route; the buccal route; the sublinqual route; the epidural route; the spinal route; the anal route; and the intracranial route.

20. (Previously Presented) The method according to claim 19, wherein the effective amount is between 0.5 μg and 2,000 μg of the GDF-8 analogue.

21. (Previously Presented) The method according to claim 19 or 20, which includes at least one administration of the GDF-8 analogue per year.

22. (Previously Presented) The method according to claims 19, wherein the GDF-8 analogue optionally has been formulated with a pharmaceutically and immunologically acceptable carrier and/or vehicle and has been formulated with an adjuvant which facilitates breaking of autotolerance to autoantigens, such as an adjuvant selected from the group consisting of an immune targeting adjuvant; an immune modulating adjuvant, a cytokine and a mycobacterial derivative; an oil formulation; a polymer; a micelle forming adjuvant; a saponin; an immunostimulating complex matrix (an ISCOM matrix); a particle; DDA; aluminium adjuvants; DNA adjuvants; γ-inulin; and an encapsulating adjuvant.

23. (Previously Presented) The method according to claim 20, wherein the GDF-8 analogue is contained in a virtual lymph node (VLN) device.

24-28. (Cancelled)

29. (Previously Presented) A method for increasing the muscle mass of an animal, the method comprising down-regulating GDF-8 activity according to the method of claim 1 to such an extent such that the muscle mass is increased at least 5% when compared to animals which exhibit normal GDF-8 activity.

30-52. (Cancelled)

53. (Previously Presented) The method according to claim 1, wherein the GDF-8 analogue is introduced without a carrier molecule.

54. (Previously Presented) The method according to claim 1, wherein the GDF-8analogue or the modified GDF-8 polypeptide optionally has been formulated with a pharmaceutically and immunologically acceptable carrier and/or vehicle and has been formulated with an adjuvant which facilitates breaking of autotolerance to autoantigens wherein said adjuvant is an aluminium adjuvant.

55. (Previously Presented) The method according to claim 59, wherein the natural T-cell epitope is a tetanus toxoid epitope.

56. (Previously Presented) The method according to claim 1, wherein the GDF-8 analogue is derived from the C-terminal, active form of bovine GDF-8 polypeptide.

57. (Previously Presented) The method according to claim 55, wherein the tetanus toxoid epitope is selected from P2 (SEQ ID NO: 13) and P30 (SEQ ID NO: 14).

58. (Previously Presented) A method according to claim 1, wherein the animal is a human being.

59. (Previously Presented) The method according to claim 10, wherein the foreign T-cell epitope is a natural promiscuous T-cell epitope or an artificial MHC II binding peptide sequence.

60. (Previously Presented) The method according to claim 21, wherein the GDF-8 analogue is administered at least 2, at least 3, at least 4, at least 6, or at least 12 times a year.

61. (Previously Presented) The method according to claim 16, wherein the GDF-8 analogue is derived from bovine, porcine, human, chicken, sheep or turkey GDF-8 polypeptide.

62. (Previously Presented) The method according to claim 22, wherein the immune modulating adjuvant is a toxin.

63. (Previously Presented) The method according to claim 29, wherein the GDF-8 activity is down-regulated to such an extent that muscle mass is increased 10, 15, 20, 25, 30, 35, 40 or 45% when compared to animals that exhibit normal GDF-8 activity.

64. (Previously Presented) The method according to any one of claims 1-4, 6-16, 18-20, 22, 23, 29, or 53-63, wherein the substitution is made in one or more of the residues 1-12, 18-41, 43-48, 49-69 or 79-104 in SEQ ID NO. 12.